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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,557

03/29/2005

Yoav Kapah

26695U

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20529

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10/18/2007

NATH & ASSOCIATES
112 South West Street
Alexandria, VA 22314

EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,557	Applicant(s) KAPAH, YOAV	
	Examiner Lynda M. Salvatore	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments and accompanying remarks filed 4/11/07 have been fully considered and entered. Claims 3 and 13 have been amended and claim 4 has been canceled. Applicant's cancellation of claim 4 renders moot the 112 2nd paragraph rejection set forth in section 5 of the last Office Action. Applicant's amendment to claim 13 is found sufficient to overcome the claim objection set forth in section 1 of the last Office Action. As such, this objection is hereby withdrawn. Applicant's amendment to claim 3 is found sufficient to overcome the 112 2nd paragraph rejection set forth in section 3 of the last Office Action. As such, this rejection is hereby withdrawn. Applicant's arguments regarding the prior art rejections of claims 1-3 and 5-13 are found persuasive. As such, the anticipation and obviousness rejections set forth in sections 7-9 of the last Office Action are hereby withdrawn. However, upon further consideration the following new ground of rejection is set forth herein below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 9-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al., US 4,916,000 in view of Anonymous RD 305027 A.

The patent issued to Li et al., teach ballistic composite material comprising 164 fabric layers comprising aramid fibers and resin matrix (column 18, 40-45, column 10, 35-50 and column 6, 5-10). With regard to the thickness limitations, Li et al., teach a composite comprising thirty layers each having a thickness of .02cm (.2mm)(column 19, 15-36). Thus, Li et al.,

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inherently meets the total thickness limitations presently set forth. With regard to the areal density limitations, Li et al., teach composite panel with an areal density of 6.02 kg/m^2 (column 19, 40-45). With regard to the pressure bonding limitations, Li et al., teach a pressure up to 69,000 kpa (703 kg/cm^2) (column 11, 1-21). Li et al., teach that the composite is suitable for use in helmet applications (column 16, 63-69).

Li et al., does not specifically teach the claimed para-aramide fibers, however, the '027 disclosure teach a ballistic composite comprising the claimed para-aramide fibers. Said composite is suitable in the formation of helmets (abstract). It is the position of the Examiner that it appears high strength para-aramide fibers of the '027 disclosure are as suitable for ballistic use as the aramide fibers taught by Li et al. It is therefore the position of the Examiner that based on the combined disclosures a skilled worker in the art would easily recognize that either aramide or para-aramide fibers could be employed in the formation of ballistic type articles. Motivation to employ para-aramide fibers over aramide fibers could be found in cost, availability and ease of manufacturing. Therefore, motivated by the desire to produce a ballistic material suitable in the formation of helmets, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the ballistic composite material of Li et al., with the para-aramide fiber taught in the '027 disclosure.

4. Claims 1-8 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al., US 4,916,000 in view of Anonymous RD 305027 A and further in view of Bottger et al., WO 00/42246.

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See the above rejection with respect to the Li et al., and RD 305027 references. With specific regard to claim 5, Li et al., teach coating the fabrics with resin matrix in an amount ranging from 1% to 150% (column 10, 40-55 and column 11, 20-column 12, 15).

The combination of Li et al., in view of RD '027 does not teach the areal density of the individual fabric layers, however, the published patent application issued to Bottger et al., teach ballistic grade fabrics comprising paraamide fibers having an areal density of 100 g/m² (page 2, 29 and page 5, 10).

Since each individual layer contributes to the overall weight and thickness of the final shell composite, it is the position of the Examiner that it would be obvious to one having ordinary skill in the art at the time the invention was made to form the individual layers in the ballistic composite of Li et al., in view of RD '027 with fabrics having desirable areal densities as taught by Bottger et al.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M. Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 15, 2007
/Lynda Salvatore/
Primary Examiner
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